

**BLOWER OPERATED AIRKNIFE
WITH AIR AUGMENTING SHROUD**

RELATED APPLICATION

[0001] This present application is a continuation in part of Application Serial No. 10/037,142 filed December 21, 2001.

FIELD OF THE INVENTION

[0002] The present invention relates generally to blowers, and more particularly to a blower-operated airknife for directing an elongated narrow width curtain of air.

BACKGROUND OF THE INVENTION

[0003] Blower operated airknives are known for directing elongated air curtains for various purposes such as, for example, drying, cooling, or cleaning items conveyed transversely through the air curtain. Such airknives typically have a narrow elongated slit-like discharge orifice and are supplied with a low-pressure air that is channeled through the discharge orifice in a downwardly or outwardly directed curtain of air. From an economical standpoint, it is desirable to use relatively low-pressure blowers with such air knives, such as blowers that operate at pressures on the order of 5 psi.

[0004] A problem with such low air pressure operated airknives is that the volume and velocity of the discharging air can be limited, which in turn can limit the effectiveness of the air curtain, including its effective transverse width, i.e. the width of the curtain in the direction of travel of items conveyed through the air curtain. Since such blower-operated air knives typically direct an elongated narrow width air curtain in a straight downward direction, it also sometimes can be difficult to apply the pressurized air stream against front and rear sides of a moving object. It also usually is not possible to limit the air flow to specific separated surfaces of passing objects.